TFT DISPLAY SPECIFICATION



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Product Specifications

Customer	**Standard**
Description	**2.9" EPAPER DISPLAY**
Model Name	**WAA0290YA8#A2N0AA-FC**
Date	**2024/08/19**
Revision	**1.0**

	Design Engineering		
	Approval	**Check**	**Design**

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Over View

WAA0290YA8#A2N0AA-FC is a reflective electrophoretic technology display module on an active matrix TFT substrate. The panel is capable of displaying black, white, yellow and red images depending on the associated lookup table used. The circuitry on the panel includes an integrated gate and source driver, timing controller, oscillator, DC-DC boost circuit, and memory to store the frame buffer and lookup tables, and additional circuitry to control VCOM and BORDER settings.

Features

- Highlight Red and Yellow color
- High contrast
- High reflectance
- Ultra wide viewing angle
- Ultra low power consumption
- Pure reflective mode
- Bi-stable display
- Antiglare hard-coated front-surface
- Low current deep sleep mode
- On chip display RAM
- Waveform stored in On-chip OTP
- Serial peripheral interface available
- On-chip oscillator
- On-chip booster and regulator control for generating VCOM, Gate and Source driving voltage
- I^2C signal master interface to read external temperature sensor
- Available in COG package

Mechanical Specifications

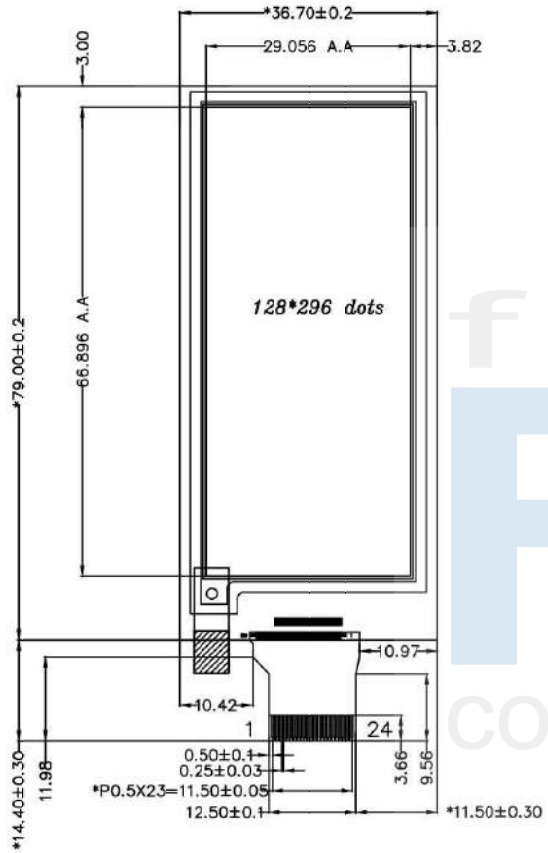
Parameter	Specifications	Unit	Remark
Screen Size	2.9	Inch	
Display Resolution	128(H)×296(V)	Pixel	Dpi:112
Active Area	29.056×6 6.896	mm	
Pixel Pitch	0.226×0.227	mm	
Pixel Configuration	Rectangle		
Outline Dimension	36.7(H)×79.0(V) ×1.2(D)	mm	
Weight	5.09±0.5	g	

Mechanical Drawing of EPD module

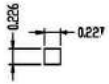
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DATE:

CUSTOMER'S APPROVED:







1	NC
2	GDR
3	RESE
4	NC
5	VSPL
6	TSCL
7	TSDA
8	BS
9	BUSY_N
10	RST_N
11	DC
12	CSB
13	SCL
14	SDA
15	VDDIO
16	VDD
17	VSS
18	VDD_15V
19	VMTP
20	VSP
21	VGP
22	VSN
23	VGN
24	VCOM

1	Display mode	EPD,B/W/R/Y
2	Resolution ratio	2.9",128*296
3	Operating Voltage:	VDD=3.3V
4	Operating Temp:	0°C~40°C
5	Storage Temp:	-25°C~60°C
6	controller/driver:	JD79661
7	Unspecified tolerance:	±0.2
8	Customer No.:	
9	Dimensions with mark"*"are important	
10	RoHS compliant	

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Input /Output Pin Assignment

No.	Name	I/O	Description	Remark
1	NC		Do not connect with other NC pins	Keep Open
2	GDR	O	This pin is N-MOS gate control.	
3	RESE	P	Current sense input for control loop.	
4	NC	NC	Do not connect with other NC pins	Keep Open
5	VSPL	P	Positive source voltage	
6	TSCL	O	I^2C clock for external temperature sensor (I^2C interface need external pull high resistance.) Must pull high or low if not used.	
7	TSDA	I/O	I^2C data for external temperature sensor (I^2C interface need external pull high resistance.) Must pull high or low if not used.(Default low)	
8	BS	I	Input interface setting.	
9	BUSY_N	O	This pin indicates the driver status.	
10	RST_N	I	Global reset pin. Low reset. (normal pull high)	
11	DC	I	Serial communication Command/Data input	
12	CSB	I	Serial communication chip select.	
13	SCL	I	Serial communication clock input.	
14	SDA	I/O	Serial communication data input.	
15	VDDIO	P	IO voltage supply	
16	VDD	P	Digital/Analog power.	
17	VSS	P	Ground	
18	VDD_15V	P	1.5V voltage input &output	
19	VMTP	P	MTP program power (10.1V)	
20	VSP	P	Positive source voltage	
21	VGP	P	Positive gate voltage	
22	VSN	P	Negative Source driving voltage	
23	VGN	P	Negative gate voltage	
24	VCOM	O	VCOM driving voltage	

Note: I: Input, O: Output, P: Power, D: Dummy, S: Shorted line, M: Mark, PI: Power input, PO: Power output,I/O: Input / Output. PS: Power Setting, C: Capacitor pin.

Electrical Characteristics

Absolute Maximum Rating

Parameter	Symbol	Rating	Unit
Logic supply voltage	VDD, AVDD,VDDIO, VDD1,VPP	-0.3 to +6.0	V
Logic Input voltage	VI	-0.3 to VDDIO+0.3	V
Operating Temp range	TOPR	0 to +40	°C
Storage Temp range	TSTG	-25 to +70	°C
Optimal Storage Humidity	HSTGo	55±10	%RH

Note: Absolute Maximum Ratings are stress ratings. Stresses in excess of these ratings can cause permanent damage to the device. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of this data sheet is not implied. Exposing device to the absolute maximum ratings in a long period of time may degrade the device and affect its reliability.

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